

ASSE ILLINOIS CHAPTER MONTHLY NEWS LETTER

CHICAGO WATER TOWER

Volume 43 Issue 7 for July 2020

Published by: Gary W. Howard



A UNION PLUMBERS BODY CAN OVERCOME ALMOST ANYTHING

A UNION PLUMBERS MIND CAN ADAPT AND RESOLVE THE PROBLEM AT HAND

A UNION PLUMBER WILL BE THE BEST THEY CAN BE

THE UNION PLUMBER HAS LEARNED TO CONVINCING THEIR OWN MIND THEY

CAN AND WILL DO IT RIGHT THE FIRST TIME

CHICAGO CHAPTER PRESIDENT NOTES

THE PLUMBERS DECLARATION OF PROTECTION

When is the course of a Plumbers Life, it may become necessary for One Phrase that connects all Man Kind through-out the world and equal with all Laws of Nature and of Nature's Generosity, a decent respect to the opinions of mankind requires that they should declare the phrase, The "Plumber Protects the Health of The Nation" as a motto that encompasses the phrase "Prevention Rather Than Cure".

We hold these truths to be self-evident that all Plumbing Laws, Codes and Standards are created and enforced for the protection of mankind. These Laws, Codes and Standards are Created with certain Rights that among these are Life (clean water and sanitation) Liberty (the right to clean water and sanitation) and pursuit of Happiness (access to clean water and sanitation) that to secure these rights, that Union Trained persons and institutions who promote Continuing Education and Training deriving their just powers from the consent of the apprenticeship programs that whenever a Form of Plumbing Advisory Board/council shall see fit to lay a foundation on such Laws, Codes and Standards, as to them shall seem most likely to effect the Health and Safety of all mankind. Prudence, indeed, will provide care in the management of Plumbing Industry and resources related to Plumbing Laws, Codes and Standards. That mankind is more disposed to suffer from disease and a poor quality of life if poor plumbing is allowed. It is the right and duty of all Apprentices and Plumbers, Plumbing Officials and Government, to have, enforce, and install all plumbing with professionalism included in a Law, Code or Standard. To prove this, let the facts of a Plumbing Law, Code or Standard speak for itself, that when following a Law, Code or Standard protects the community.

Sincerely,

Gary W. Howard President
American Society of Sanitary Engineering
Illinois Chicago Chapter

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Published in cooperation with members of ASSE, Editor: Gary W. Howard

HAPPY INDEPENDENCE MONTH

THE AMERICAN SOCIETY OF SANITARY ENGINEERING AND THE INTERNATIONAL ASSOCIATION OF PLUMBING AND MECHANICAL OFFICIALS ARE DIVERSE IN EMPLOYEES AND VOLUNTEERS HERE AND AROUND THE WORLD. WE ARE PROUD OF THE MEMBERSHIP AND COMPANIONSHIP WE HAVE ESTABLISHED OVER THE YEARS PAST. I WISH TO THANK EACH AND EVERY ONE OF YOU FOR YOUR COMMITMENT TO THE ORGINAZATION.

G.W. HOWARD.









**We never stop learning about Prevention Rather than Cure and the
Safety of the people of the World**

Please visit IAPMO for free Covid 19 Series education

<https://www.iapmo.org/webinars/covid-webinars>



When: August 17-19, 2020

Where: UA Local 130 Training Center, Chicago, IL

Register: www.iapmolearn.org

The International Association of Plumbing and Mechanical Officials (IAPMO), in conjunction with Special Pathogens Laboratory (SPL), is offering an ASSE 12080 *Legionella* Water Safety and Management Specialist Certification Training program, Aug. 17-19.

SPL President Janet Stout, Ph.D., a clinical and environmental biologist with more than 30 years of pioneering research in *Legionella*, will teach the three-day course. The speakers will include David Pierre, vice president of SPL Consulting Services, and Michael Castro, MPH, SPL's director of Healthcare Services.



“This training provides the critical knowledge that industry professionals need to prevent this life-threatening disease. At completion, attendees meet the knowledge requirements for the very first Legionella professional qualifications standard [ASSE 12080]. IAPMO’s expertise in education and training, together with Special Pathogens Laboratory, provides participants with the knowledge they need to become an ASSE certified professional for Legionella water safety and management, getting us closer to ending Legionnaires’ disease!”

- SPL President Janet Stout, Ph.D.

Attendees will gain the requisite knowledge, understanding, and competency to serve as a member of a facilities water safety team to help protect against *Legionella* outbreaks and react to one appropriately should it occur. The program will focus on the development of a risk assessment analysis, and water management and sampling plan, for protection from *Legionella* and other waterborne pathogens. The training will also cover the codes, and the resources, understanding, and skills needed to conduct a facility risk assessment and implement a water safety and management program to reduce the risk of infections due to *Legionella*.

The ASSE 12080 certification exam will be administered at the end. Attendees who pass the exam will become certified as *Legionella* Water Safety and Management Specialists.

The training program is scheduled for 8 a.m.-5 p.m. Aug. 17-19 at the UA Local 130 Training Center, 1400 W. Washington Blvd., Chicago. The registration fee includes the ASSE exam, the SPL workbook *Puzzled by Legionella? A Guide to Understanding Detection, Prevention, and Water Management*, and lunch.

For information about the ASSE 12080 standard, visit <https://bit.ly/31dzNoQ>.



2020 ASSE INTERNATIONAL ANNUAL MEETING UPDATE

Out of an abundance of caution and concern for the health and safety of our members and staff, ASSE International has made the tough decision to hold its 2020 Annual Meeting via Zoom web conference instead of in person at the San Diego Marriott Mission Valley. With an increase of COVID-19 cases nationwide, and with so much yet to understand, we are taking this precaution to protect our event attendees and the general public.

Along with most organizations, canceling our in person events is the right decision – not only to protect the health of our attendees, but also because of the unpredictability of travel and hotel accommodations. Because of these uncertainties, we have decided to host the 2020 Annual Meeting virtually.

Please note that meetings are NOT canceled – the majority of our scheduled meetings will still take place via Zoom's online meeting and web conferencing tool.

The dates of the 2020 ASSE International Annual meeting will remain the same – **Oct. 26-29** – and the meetings will be **open to all, free of charge**. We will also continue accepting sponsorships for the 2020 meeting and will provide as much company exposure as possible before, during, and after the four day virtual meetings.

While we are still working on the schedule of events, sponsorship opportunities, and other specific details, we want to assure you that this year's meeting will be as

productive and fun as ever. We're even working on some games and activities for attendees, and have a few surprises up our sleeves. This could even prove to be a great opportunity for members who have never attended an Annual Meeting due to travel or financial restrictions – no travel, lodging, or registration fees are required this year!

We will be posting the 2020 schedule, along with sponsorship info, agendas, and Zoom call-in information and access codes, as soon as possible at www.asse-plumbing.org/am20.

At the ASSE International Annual Meeting, experts from all segments of the industry will gather electronically to participate in meetings, view educational seminars, and celebrate member achievements. From manufacturers, engineers, and contractors, to students, instructors, and administrators, all involved in our industry will find the ASSE International Annual Meeting to be time well spent.

We look forward to meeting with everyone online to continue our business, and we wish you all the best during this unique time. Stay healthy and remember ASSE's timeless motto, "Prevention Rather Than Cure."

Thank you for your understanding and patience,

ASSE International

NEWS YOU CAN USE

Have you ever thought of the high energy consumption and wasted water or even a premature degrading of a hot water systems components?

Here in the Chicago area and through-out the Nation all of our hot water systems need to be designed by a professional designer familiar with how the system is supposed to work, along with how to maintain the system to eliminate expensive repairs in the future. These designs play a very important role in how long the system will be efficient without costly repairs of maintenance. Owners or tenants should not have to endure the problems with a poorly designed or poorly installation of the hot water system. Starting with the basics you will need for the system is as follows:

- a. *Cold water supply to the heating unit with an isolation valve*
- b. *In some cases a pressure reducing valve*
- c. *A expansion control valve(pressure relief) / expansion tank*
- d. *Temperature/pressure relief valve (some units)*
- e. *A temperature gauge or Petes plug probe*

f. *A return connection to the cold water side of the heating unit with a flow direction indicator valve , a temperature gauge, union (s), in some cases a properly sized 24>7 circulating pump (s)*

g. *A dielectric union or dielectric nipple*

ALL THE ABOVE ARE ON THE INLET SIDE OF THE HEATING UNIT

ALL THE BELOW ARE AFTER THE HEATING UNIT

h. *A dielectric union or dielectric nipple*

i. *In some cases an isolation valve*

j. *Temperature/ pressure relief valve (some units)*

k. *A temperature gauge or Petes Plug probe*

l. *An air elimination device with an isolation valve*

m. *Thermal expansion connectors or loop all should be on the same floor and the same level if possible*

n. *Connection from the hot water distribution supply and the return should be as close as possible to the plumbing fixtures supplied with hot water connections should be supplied with isolation valves, unions, and balancing valves and circuit setters in a common accessible area*

o. *All units shall be supplied with isolation valves in a common area*

p. *In some cases a properly sized 24>7 circulating pump(s)*

q. *In some cases a meter to determine how many GPM are returned*

r. *Larger heating units may require a separate Backflow Prevention Assembly*

This will work in an up feed or down feed system. And yes all valves shall be lead free.

The purpose of a returned hot water system in a building is to allow the delivery of hot water to a plumbing fixture in a timely manner over a lengthy distance without the waste of large amounts of water. The return should be designed to be installed in the shortest or easiest path as possible by allowing the very remote section with the least time to receive the hot water. Always try to use thermostatic balancing vales or auto balancing valves because they are self-regulating and can cut down on time as opposed to manual balancing valves. You must install the right pipe size for each return connection as not to have on working against one another. When you have a contract to install a return system please include either a maintenance contract for the balancing valves or a waiver. These are no an install and misrecollect the installation that they will stay balanced forever.

One of the most important things to remember is to bleed out as much air as possible before you attempt to balance a return system. Remember the most of the inlet water does allow the air to be dissolved and will appear later in the system at the highest point during the less used time period. This can and will create cavitation in your pump(s) or even no flow at all with an airlock.

All systems both manual or thermostatic need to be documented that the flow and temperature so that the system functions as it is intended by the designer and the Code, Standard and are up to the manufactures recommendations and installation specifications.

Correctly adjusting you pump(s) to the proper setting is crucial to set after all air has been removed (do not set to the highest setting and forget about it) high velocity is devastating to the returned piping through erosion corrosion. The reason you install a flow meter near the heating is to determine the return of flow should not exceed 3.25 feet per second maximum flow to accomplish this you need properly sized piping and properly sized and correctly adjusted circulating pump(s).

If you have a three inch main hot water feed, don't think that a one inch return pipe will support the system working properly. Cavitation and erosion corrosion are associated when the velocity change of direction is sharply changed with a pipe that has not been reamed properly or is at high velocity flow. An un-reamed pipe will cause the pressure to drop immediately after the burr and create bubbles that in turn starts to collapse when return to the normal pressure zone. This is where the erosion happens to the metal in microscopic sections and eventually creating the failure of the pipe which creates a leak. This effect would happen more frequently just after a 90 degree turn in the system.

All circulating systems for hot/tepid water shall be design to last the life of the system with proper maintenance. All system will require temporary adjustments through-out the life of the system.

Why the conflict between OSHA and ASHRAE on circulating systems? "Do your research"

Gary W. Howard President Chicago Chapter

One of my favorite quotes from History

“These are the times that try men’s souls. The summer soldier and the sunshine patriot will, in this crisis, shrink from the service of their county; but he that stands it now, deserves the love and thanks of man and woman. Tyranny like hell is not easily conquered yet we have this consolation with us, the harder the conflict, the more glorious the triumph. What we obtain too cheap, we esteem too lightly; it is dearness only that gives everything its value.”

– Tom Paine



March 5, 1770: First American Killed During the American Revolution, a Black Man!

On March 5, 1770, British soldiers opened fire on a group of unarmed American protesters, killing 5 (either 3 or 4 immediately, one dying later), an event referred to as The Boston Massacre, sometimes called the first shots fired in the American Revolutionary War. The first American gunned down was Crispus Attucks, a freeman of African and Native American descent.

Described in contemporary documents as a “mulattoe,” Attucks was of mixed race, definitely of African and Wampanoag descent, possibly with White mixed in. It is not known if he was a runaway slave, or if he had been freed.



Speculative posthumous portrait of what Attucks may have looked like

By 1770, tensions in America between colonials and the British overlords had become strained, and when a group of Americans started heckling and harassing a British soldier several other British soldiers came to the sentry's assistance. The mob of irate Americans continued their tirade against the "lobsterbacks," so called because of their bright red uniforms, even to the point of poking them in the chest. After repeated orders to disperse and threats to open fire, the British suddenly fired on the crowd, killing the 5 martyrs.



This 19th-century lithograph is a variation of the famous engraving of the Boston Massacre by Paul Revere. Produced soon before the American Civil War and long after the event depicted, this image emphasizes Crispus Attucks, who had become a symbol for abolitionists. (John Bufford after William L. Champey, ca. 1856)

Irate Americans demanded the soldiers involved be tried for murder, and 8 of the Redcoats that had fired were tried, with future President John Adams acting as their attorney. Adams argued that the mob, which he called "a motley rabble of saucy boys, negroes, and molattoes, Irish teagues and outlandish jack tarrs [i.e. sailors]" presented a threat to the soldiers and that the shooting was in self-defense. The trial resulted in 6 acquittals and 2 convictions on the lesser charge of manslaughter, the 2 convicted soldiers branded on the hand as punishment. The argument for avoiding the death penalty was the English claim of "benefit of clergy" which originally pertained to the

clergy to avoid extreme punishment, and in this case referred to the soldiers acting in context with their position of duty as mitigation for their actions.

Attucks had been born in Massachusetts around 1723 (thus 47 at the time of his death), a slave of a local Deacon. A 1750 advertisement by Deacon Brown for a runaway slave called "Crispas" may refer to Attucks. It is believed Attucks had become a sailor or a whaling man after running away, although his status as either a "runaway" or a "freeman" is debated by historians. He may have used an alias, Michael Johnson, to avoid arrest. Contemporary accounts do not refer to him as a Negro, but as either mixed race or as an Indian. The term, "mulattoe," as used in 1770 may have referred to a full blooded Native American or a person of any mixture of races, not necessarily an African American mixed race person. It could even refer to a lighter skinned African.

In any case, it is probable that Attucks was in some form of African descent, and both African Americans and Native Americans proudly point to his sacrifice as an early martyr to the American Revolution and Independence. History has likewise honored the sacrifice of Crispus Attucks and the other 4 martyrs of the Boston Massacre, and his name was invoked by abolitionists. Even Stevie Wonder referred to Attucks in his song, "Black Man," referring to Attucks as "First man to die for the flag we now hold high was a black man."



Boston Massacre grave marker in the Granary Burying Ground

The Boston Massacre was commemorated by Paul Revere in a famous engraving copied from an engraving by Harry Pelham and the event is considered to be the tipping point in revolutionary fervor leading to American Independence. The 5 men killed that day are often referred to as the first casualties of the American Revolution. The name Crispus Attucks deserves a place on the honor roll of African American heroes.

CHICAGO, ILLINOIS SANITATION FROM THE BEGINNING

Water



MARQUETTE'S MAP

Chicago's unusual wastewater disposal history was conditioned by the location of the city at the juncture of Lake Michigan and the Chicago River. Initially, the city used the lake to supply water and to dispose of wastes. Beginning in the 1850s on an informal basis, and in 1871 on a formal basis, Chicago flushed its wastewater into the Mississippi River drainage system by reversing the flow of the Chicago River. With continued growth, sewage treatment works became necessary to conserve the lake water quality. Before its natural topography was altered, the Chicago River reached the Des Plaines River during the wet seasons via a shallow lake across the divide between the Great Lakes and Mississippi River drainage systems. The first regional public work proposed was a canal crossing the Chicago portage, to create a permanent, navigable waterway between the Atlantic Ocean and the Gulf of Mexico. When completed in 1848, the Illinois & Michigan Canal was fed by the Des Plaines and Calumet Rivers and by the South Branch of the Chicago River through a lift wheel at Bridgeport. A second topographical feature that contributed to the shaping of Chicago's wastewater strategy was that, during wet seasons, the flat, nonporous terrain turned to mud. In 1852, the Illinois legislature empowered sewage commissioners to install sewers in the most densely settled areas of Chicago.



DEDICATION OF WATER TOWER, 1867

The board's plan, designed by chief engineer Ellis Sylvester Chesbrough, called for an intercepting, combined sewer system that emptied into the river. Chicago's flatness created problems. These were resolved by the costly expedient of raising Chicago's level. The new sewers were laid at the level necessary to accomplish gravity flow. Earth was then packed around them and new streets were constructed above the sewers. Much of the fill was obtained by dredging the Chicago River in order to lower and enlarge it. Inevitably the river became heavily polluted. The pollution spread from the river into Lake Michigan until it reached the water supply intake. The river was probably first reversed during several dry summers in the 1850s. To maintain the summit level in

the canal, the Bridgeport lift wheel was run continuously, and lake water was pulled through the river. By 1860 Chicago's sewerage commissioners were considering a permanent reversal.



"THE GREAT CHICAGO SEWER," 1871

As conditions in the river worsened, other civic leaders agreed. An 1865 report recommended the canal be deepened over the 26-mile stretch between Bridgeport and Lockport, and additional pumps were to be added at Bridgeport. These new works, completed in 1871, formally reversed the flow under normal conditions and transformed the canal into an open sewer whose current diluted impurities. The Sanitary District of Chicago (now the Metropolitan Water Reclamation District of Greater Chicago) was created at the end of the century as the Chicago metropolitan area quickly outgrew the canal's wastewater-carrying capability.

The Sanitary District Enabling Act of May 29, 1889, was a direct result of the Drainage and Water Supply Commission's recommendation to create a regional government for solving water supply and wastewater problems. The enabling act provided for the construction of the Chicago Sanitary and Ship Canal to collect sewage and discharge it, diluted with Lake Michigan water, into the Des Plaines River. It was cheaper to build a new canal than enlarge the old one. Section 23 set the channel's capacity at 10,000 cubic feet per second, the Chicago River's maximum measured flood flow. Over time, the district annexed contiguous areas. The two largest additions, the North Shore and Calumet areas, were added in 1903. The North Shore (1910) and the Calumet-Sag (1922) Channels were constructed to serve these areas. In 1895 a federal commission investigated the new channel's potential effect on lake and harbor levels. Its report claimed that the district's proposed diversion of 10,000 cfs would lower the level of the Great Lakes by six inches. From this point forward, overestimates would fuel the long-running "lake levels controversy." The concern with lake levels, which was more likely the result of climatic variation than Chicago's diversion, was undoubtedly influenced by the fact that several Great Lakes states brought lawsuits to restrain Chicago from diverting any water at all. The inclusion of Canada in these suits, through the International Waterways Commission, gave impetus to the effort. The IWC argued that the growth of industry, combined with continued population growth, would put significant pressure on the sewage-handling capabilities of the channel system. All the critics, as well as many within the district, agreed that some form of sewage treatment would eventually prove necessary in addition to (if not in place of) the open sewers.



SANITARY-SHIP CANAL ALBUM, 1892-1900

While these suits were pending, the main channel was constructed in three distinct sections: an earth section between Robey Street (now Damen Avenue) and Summit, an earth and rock section between Summit and Willow Springs, and finally a rock section from Willow Springs to Lockport.

When completed, the rock section was 40 percent larger than the other two. This proved to be the determining factor in selecting a size for the Calumet-Sag Channel, which reached its confluence with the main channel at the Sag, the north end of the rock section. Residents of the Illinois River basin, into which the main channel emptied, objected to receiving Chicago's wastewater. St. Louis believed the wastewater posed a threat to its Mississippi River water supply. On January 2, 1900, the district quietly removed the dam at the main channel's northern end, and two weeks later, on January 17, the dam at Lockport opened. That same day, Missouri petitioned the U.S. Supreme Court to enjoin the state of Illinois and the Sanitary District of Chicago from discharging sewage into the new canal, a suit that was ultimately unsuccessful.



SKOKIE MARSH

Chicago quickly felt the beneficial effects of the new channel. The typhoid death rate fell by almost 80 percent, and there were similar decreases for other waterborne diseases. Within 10 years, however, it was clear that the critics were correct: the channels were too small to handle the growing volume of domestic and industrial wastes. Consequently, during the 1920s, the district began to construct the major treatment works that became the foundation of its wastewater strategy. The U.S. Supreme Court limited the annual average net diversion from Lake Michigan to successively lower levels over an eight-year period, ultimately reaching a level of 1,500 cfs. This decision reinforced the district's shift from a strategy based on open sewers to one based on wastewater treatment. The Calumet sewage treatment works had been placed in operation in 1922, followed by the North Side works (1928), the West Side works (1931), and the Southwest works (1939). These plants were enlarged and additional plants added (Hanover Park, John E. Egan, and O'Hare) as continued regional growth increased the quantity of wastewater needing treatment. By 1970 Chicago had the largest wastewater treatment facilities in the world. Three important problems persist. First, the lake levels controversy remains. Since the channel system still receives the treated

effluent and overflow, it is necessary for some diversion to provide a current. When drought conditions in the 1980s hampered navigation on the Illinois and Mississippi Rivers, suggestions that the Chicago diversion be increased were opposed on the basis of the potential reduction in lake levels. Second, pollution continues to affect the area. In 1969, the Sanitary District adopted an ordinance that forced pretreatment of industrial pollutants at their source. It prohibited discharges into Lake Michigan and reduced those into the waterways. Although more than 90 percent of the district's wastewater is treated, a heavy rainfall or quickly melting snow still can force the district to open the floodgates and let raw sewage escape into the lake, violating the spirit, if not the letter, of this law.



DEEP TUNNEL SYSTEM, 2003 (MAP)

A 1972 federal law required areawide planning to control water pollution. The Tunnel and Reservoir Plan (TARP), prepared by the Northeastern Illinois Planning Commission with Sanitary District expertise, provided a solution to the third problem, the lack of efficient natural drainage in such a flat region. The majority of the district has combined sewers carrying both waste and storm water. Heavy rainstorms can overload the combined sewer systems so that the sewers overflow into the district's waterways and flood low-lying areas. Phase 1 of TARP, the antipollution phase, which went into operation in 1985, involved the construction of 10 miles of tunnels to capture the overflow. Phase 2, the antiflooding phase, calls for an additional 21 miles of tunnels plus three large reservoirs. From the initial reversal of the river, to the creation of the Sanitary District, to the planning mandated by federal law, as the city's human and business populations grew, the underlying objective of Chicago's wastewater strategy has been to protect and conserve the area's Lake Michigan water supply.



Free Patch for active members who send a self-stamped address envelope with two stamps and a copy of your membership card to 6001 Wolf Rd, LaGrange, IL. 60525



MONTHLY CONTEST (CANCELED UNTIL FUTHER NOTICE)

For the Apprentices at Local Union 130 Enter and win First two with the correct answers **wins** First year membership to ASSE will be free with the agreement you sign up for at least three years of membership. send answers to Cristina Barillas cbari130@aail.com

50% off new active member dues on the first year. As a member of ASSE International you will belong to an organization represented by all disciplines of the plumbing and mechanical industries, forming a platform to receive, understand and solve industry problems relating to standards, codes, contracting, engineering, and business. We encourage you to attend Meetings, get involved in chapter activities and apply for national committee work. Whether it's through planning, or participating in local chapter activities and meetings, submitting articles to our publication, or volunteering on a committee, your involvement is essential to ASSE International success. Now is the time to immerse yourself in your organization.

A few privilege's you will enjoy as an ASSE International member:

. Networking and educational opportunities within our industry

• Free subscription to ASSE International publications *Working Pressure* magazine and *ASSE international*

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Manufacturers of plumbing products and appliances, or others who are affiliated with the plumbing and mechanical field and desire to support the work of the organization. One member or representative of such membership will have privileges of an Active member.

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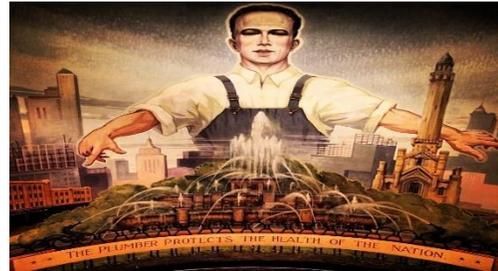
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“I’ll tell you what the Plumbing trade means to me.
Plumbing is the determination to take what task is given to
you study it and install it right the first time everytime”



We thank Chicago Journeymen Plumbers Local Union 130 U.A. for their continuing support.

We also thank our many sponsors who have over the years continued to support the American Society of Sanitary Engineering Illinois Chicago Chapter and the International American Society of Sanitary Engineering. Please use our sponsor resources for all you material needs and professional services when possible. Please see our advertisement pages for contact information.

LOCAL UNION 130 U.A. IS LOOKING FOR APPRENTICE TECHNICAL ENGINEERS PLEASE ASK AROUND FOR NEW HIGH SCHOOL GRADUATES OR IN GENERAL

Go to the Plumbers Web site www.plumberslu130ua.com click on Training and then click Tech Engineers and then click on Apprenticeship Application

**Technical Engineers Training
2020 Technical Engineer Apprenticeship Program**

UA Local 130 Technical Engineers Division is proud to be accepting applications from residents of Illinois and Indiana. Please download an application package and SCHEDULE a time to submit your application package and payment. **ABSOLUTELY NO WALK-INS WILL BE ACCEPTED.**

CHICAGO APPLICATION PACKETS may be submitted by scheduling an appointment time June 1 - 5 2020 between 8am - 12pm and June 8-12 between 8am -12pm.

INDIANA APPLICATION PACKETS may be submitted by scheduling an appointment time for June 17 - 18 between 10am -2pm.

YOU MUST SCHEDULE AN APPOINTMENT TIME ASAP TO SECURE YOUR PREFERRED TIME SLOT.

Please click here to view the [NOTICE](#).

Please click here to download the [APPLICATION PACKET](#)

TAKE PRIDE IN YOUR WORK

Location of gas valves are important for replacement. Proper installation of relief valves could become an important issue. Location of water control valves may be an issue for replacement. A clean makeup air filter would help.

Look close the couplings, 90 degree ells and the dielectric unions are not soldered .Gas main will have to be shut down because of the locations of the gas valves for replacement of the heaters. Reliefs shall be independent and drained into the same room 890.1230 d 4 of the 2014 State Code. The water distribution mains shall be shut down because the heater control valves are too low to remove the heater for replacement. Air filter filthy and fallen out of place. Unsoldered fittings shall be soldered.





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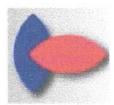
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Advocacy and Support You Can Count On

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The PCA represents and promotes UA Local 130 signatory plumbing contractors in Chicago and Northern Illinois (17 counties) with top quality service, education, advocacy, safety, peer to peer networking and much more. Consumers: To hire one of our reputable plumbing contractors for residential or 24-hour emergency service, click on "[Find a Plumber](#)" or call 1-800-76-VALVE (82583). Contractors: To subcontract one of our reputable plumbing contractors for residential, commercial, municipal or industrial work, click on "Find a Contractor" or call 312-563-9526.





WSA Programs

From safety initiatives to educational programming and more, WSA's programs are all designed to do one thing: make our contractors more competitive by lowering their cost to do business.

Case in point: WSA's Safety Materials Program, which offers our member contractors – at no charge to them – quarterly access to hard hats, high-visibility t-shirts, a series of safety messages to distribute as part of their own safety program, vehicle decals, and even Illinois and Department of Labor jobsite posters.

Safer employees can mean lower mod rates for contractors, meaning the savings can go farther than just registration rates.

It's all part of WSA's commitment to improving the bottom line for its members. Isn't that what your contractor organization should be all about?

PATRIOTIC COOKIES

153—GINGER COOKIES

- | | |
|-----------------------------------------------------------|---------------------------|
| 5 cups of flour (3 cups white flour,
2 cups rye flour) | 1 teaspoon baking powder |
| ½ cup of brown sugar | ½ cup molasses or sorghum |
| 1 tablespoon ginger | ½ cup melted fat |
| ¾ teaspoon salt | 1 tablespoon vinegar |
| 1 teaspoon soda | ½ cup water |

Sift together the flour, soda and spice; mix the water, sugar molasses and fat, and add gradually to the dry ingredients. Mix well. Chill. Roll on a floured board to ⅛-inch thickness. Cut with a floured cutter. Bake in a moderate oven (185° C to 190° C) for about 10 minutes. This makes about ninety cookies.

154—HONEY DROP COOKIES

- | | |
|--------------------|------------------------------------|
| ¾ cup honey | ¾ cup of rice flour |
| ¼ cup fat | ½ teaspoon soda |
| 1 egg | 2 tablespoons water |
| 1½ cup white flour | 1 cup raisins, cut in small pieces |
| | ¼ teaspoon salt |

Heat the honey and fat until the fat melts. Sift together the flour, soda and salt. To the cooled honey mixture add egg, well beaten, water and raisins. Add gradually to the dry ingredients. Drop by spoonful on a greased sheet. Bake in a slow oven (180° C to 185° C) for about 12 to 15 minutes. This makes about 42 cookies.

½ teaspoon cinnamon and ⅛ teaspoon of cloves may be added to the honey mixture.

ASSE ILLINOIS CHICAGO CHAPTER HAS BEEN INVOLVED FROM THE BEGINNING TO THE END OF EVERY PROJECT IN CHICAGO AND POSSIBLY ILLINOIS SINCE AT LEAST FROM 1918. TAKE PRIDE IN BEING A MEMBER





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RK 34-975XLC
Repair Kit for ¾"-1" 975XL

Kit Includes: (2) Check Poppet, 1st Check Spring, 2nd Check Spring, Relief Valve Spring, (2) Check Seat, (2) Check Seat O-Ring, Relieve Valve Seat, Relief Valve Seat O-Ring, Lube

Ames 7010046 – 2 ½"-10" Total Relief Valve Kit for a C/M 400/C500

Kit Includes: Complete RV with 36" Hose, RV O-Ring and Lube



Ames 7010097 – First Check Assembly 2 ½"-4" for Ames 2000/3000SS

Kit Includes: 1st Check Assembly, O-Ring and Lube

Ames 7010114 –Relief Valve Kit 2 ½" -10" for 4000SS RP and 5000SS RPDA

Kit Includes: Complete Relief Valve Assembly, Relief Valve O-Ring, Lube

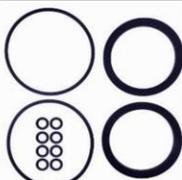


Watts: 0794090 – Complete Total Rubber Kit 4" for 909 RP; *Lead Free* (Previously 0887751)

Kit Includes: Check Disc, Cover O-Ring, Sleeve O-Ring, Piston O-Ring, RV Disc Assembly, Diaphragm, Piston

RK 4-350
4" 350AST, 4" 375AST

Kit Includes: (2) Check Disc Rubber, (2) Cover O-Ring, (8) Bolt O-Ring, Lube



Apollo-Conbraco: 40-004-A1 – ¾"-1" Major Repair Kit for 40-200 RP

Kit Includes: RV Bushing, RV Stem, Diaphragm Plate, (2) Poppet, RV Diaphragm, RV Seat Disc, (2) Check Seat Disc, Stem O-Ring, Bushing O-Ring, (2) Check Cap O-Ring, RV Spring, (2) Screw, (2) Retaining washier, (2) Check Seat, (2) O-Rings, RV Seat, RV O-Ring



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Please CHECK which class you would like to attend:

****All classes will be from 5pm – 9pm with Dinner included****

BACKFLOW REPAIR COURSE \$85

This course is focused on refreshing the Cross Connection Tester on testing procedures as well as hands on repairs for approved assemblies for the state of Illinois. During this class we will be going over our NEW mechanical wall, show you how water pressure fluctuations affect backflow assemblies, how to remedy the situation and be able to see it in a live setting. Also new this year is the Flood Control Integrated System by Wilkins; this system can be designed to shut off a specific water line when a backflow goes into a full dump situation.

Thursday, January 16th

Thursday, February 27th

Thursday, April 2nd

Thursday, January 30th

Tuesday, March 3rd

Thursday, April 16th

Thursday, February 13th

Tuesday, March 17th

Thursday, April 30th

NEW!! LARGE BACKFLOW REPAIR (SMALL GROUP) - Max 12 attendees per class \$125 per person

Small group backflow repair class. Classes will consist of 3 individual groups working with an individual instructor to do hands on testing, diagnosis, and repair of large backflow assemblies only. The repair class will involve repairing of the following backflow assemblies:

• 4" Febco 825YD

• 3" Watts 009

• 4" Wilkins 375AST

• 4" Ames 4000SS

• 8" Ames Maxim 400

• 3" Watts 909

Tuesday, January 21st

Tuesday, February 18th

Thursday, March 26th

Tuesday, February 4th

Thursday, March 12th

Tuesday, April 7th

Tuesday, April 21st

Location: Test Gauge, Inc. | 1051 E Main St, Unit 107 | East Dundee, IL 60118

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